Precipitation Monitor
5.4103.10.000

Range of application

The precipitation monitor transmits signals to determine the beginning and the end of precipitation and the duration of the period of precipitation as required by meteorological services.

In addition, the precipitation monitor can be used to report status or to transmit control signals to connected rain protection devices such as windows, air vents or awnings.

Mode of operation

Drops of precipitation are detected by means of a IR light barrier system. The drops interrupt the light barrier, thus triggering a signal in the connected electronics.

The instrument is equipped with an "event filter" to prevent misinterpretation of data due to the effects of insects, bird droppings, falling leaves etc. Precipitation is only reported if at least 2 drops pass through the light barrier system at a certain speed within 50 seconds of each other. Precipitation is reported by a cut through relay. An adjustable switch-off delay smoothes the switching signals when there are a number of short-term precipitation events.

The instrument is equipped with a heating system for extreme weather condition. This maintains a temperature of > 0°C on the surface of the monitor (housing cover) in order to prevent ice from forming and snow from piling up. A soiling of the sensor windows is avoided to the greatest possible extend by their vertical position that keeps the windows moisture free. Therefore, the maintenance requirements are very small.

By using PTC`s as heating elements the power input can reach a high peak value during the switch-on phase. This value must be limited on max. 50 W (for ex. by means of the adequate Power Supply Unit)

Technical data

Measuring principle: IR-light barrier
Measuring value: Precipitation
Output: relais contact (Precipitation yes/no)
Sensor area: 25 cm²
Sensibility: drop size ³ 0,3 mm
Event sequence
Switch-on: min. 2 precipitation drops within 50 sec
Switch-off: delay adjustable 50; 100; 200; 400 sec
Relais-output: single pole switch
Contact load: 230 V AC; 4 A AC; 1000 VA (W)
Operating voltage: 24 V AC/DC ± 15 %
Heating: approx. 10 W self regulating
Ambient temperature: -25...+55°C
Protection: IP 65 acc. to DIN 40050
Weight: 0,4 kg

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